INDUSTRY AND MECHANICS

MACHINE FOR MELTING SNOW

Stream of Briny Steam From Pipe Speedily Converts Frozen Mass Into Running Water.

Blizzards should have no terrors for street railway companies and street cleaning contractors if they have an equipment including the snow melting machine invented by an Oregon genius. This machine traverses the streets under its own power and projects a stream of briny steam from a pipe that speedily converts snow into water, permitting it to be drained off in a few hours by the sewer inlets. The apparatus consists of a wheeled platform on which

Snow Melting Machine.

a hot air furnace is mounted. On top of the furnace is a brine tank, and a pipe carries water to this. Another and much larger pipe extends from the front of the apparatus and to within a foot or so of the ground. The furnaces, besides supplying steam power to drive the vehicle, converts the water that passes through the tank into briny steam that passes through the large pipe in front and melts the snow like magic.

ASBESTOS MINED IN CANADA

Mineral Product of Dominion Controls Industrial Situation—Discovered by Farmer.

Nearly all the asbestos of commerce comes from Canada. Perhaps the chief distinguishing feature from the point of view of composition as between the Italian and the Canadian varieties is to be found in the fact that the former is said to be anhydrous, says a writer in Cassier's Magazine. However, the Canadian mineral controls the industrial situation. As far back as the middle of the last century asbestos was known to exist in Canada. But little attention was attracted, probably because of a noncommercial size of the deposits. A farmer, Pecteau, discovered in 1877 the mineral in commercial quantities and almost immediately production became valuable. In 1890 the total value extended to $1,250,000. This value of output has never been equaled since, unless the exception has occurred in the last year or so. The weight of asbestos produced in 1890 was 9,860 tons, having an average value of nearly $128 per ton. The value per ton has pretty steadily declined since. Once put into exportable shape, Canada's asbestos is, for the most part, sent to the United States. The average amount thus annually exported to her neighbor during the decade ending June 30, 1904, was about 15,000 tons, having a value of about $450,000, or $30 per ton.

MAKING SIMPLE DEPTH GAGE

Apparatus in Use Twenty Years Without Renewing the Pine Plug Described by Designer.

A simple depth gage can be made as follows: Take a piece of steel five-sixteenths of an inch thich and one-half inch wide and about three and one-half inches long. Drill a one-eight-inch hole lengthwise in the end to one side of the center line. About three-fourths of an inch from the end

Simple Depth Gage.

drill a hole one-sixteenth inch in diameter, at right angles to and cutting into the first hole, one-third of its diameter. Now this hole drilled lengthwise is plugged with a pine plug. The hole at right angles in the steel receives the gage wire, and when inserted compresses the pine plug where it crosses. This gives the desired friction, which will hold the gage wire any place that is required in gaging the depth of an aperture. Mr. Clark, the designer of this gage, has used one twenty years without renewing the pine plug.—Scientific American.

MODERN DRY GOODS HOUSES

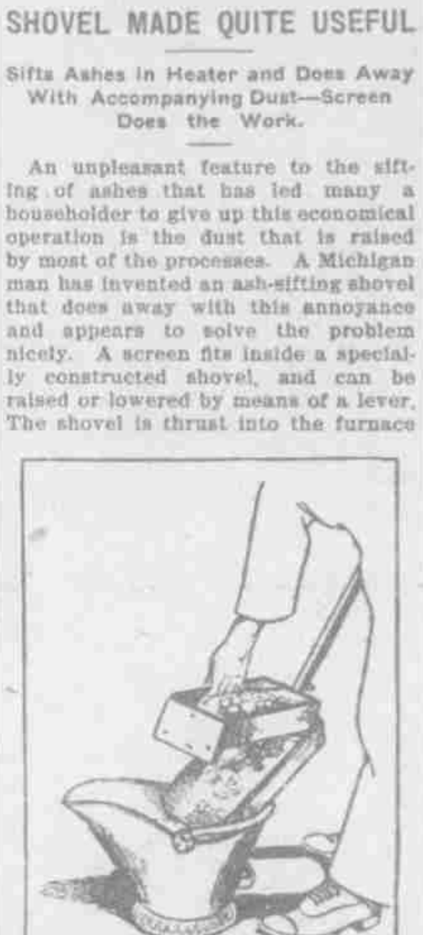
As Much as $100,000 Expended in Preparation of Samples Sent to Various Country Customers.

Some of the larger dry goods houses of this country are said to expend annually as much as $100,000 in the preparation of samples, which are sent to their patrons throughout the country from which to make selections of stock. These firms, of course, handle a great many different grades and designs, and quantities of fine materials must be cut up into small pieces and pasted by hands on cards on which have been printed the numbers by which the samples are identified. In this connection these firms are at the mercy of careless employes, who may cause serious losses and delays in confusing the samples while the pasting is being done. Recently the idea has been conceived of reproducing the samples by making embossed impressions on the card. The inventor has devised a method of reproducing the textile fabric so accurately that one can actually count the threads on the embossed paper reproduction by using an ordinary counting glass. Any slight irregularity in the cloth is faithfully reproduced. Instead of making up the samples in separate cards, he makes up a complete line in a long folder, something like that of a railroad time table. On the first page is a piece of the actual material, which the buyer may examine critically to test the quality of the line. The different patterns he can select by referring to the samples. As an evidence of the perfection of this embossed reproduction, not only colored samples of cloth are reproduced, but even white goods. The paper sample card has been adopted by a number of large merchants in New York City, who find that it cuts down their sample bill fully 50 per cent.

SHOVEL MADE QUITE USEFUL

Sifts Ashes in Heater and Does Away With Accompanying Dust—Screen Does the Work.

An unpleasant feature to the sifting of ashes that has led many a householder to give up this economical operation is the dust that is raised by most of the processes. A Michigan man has invented an ash-sifting shovel that does away with this annoyance and appears to solve the problem nicely. A screen fits inside a specially constructed shovel, and can be raised or lowered by means of a lever. The shovel is thrust into the furnace



Useful Shovel.

and a load of ashes taken up. The screen is then raised a couple of inches and the implement put back into the heater and shaken back and forth until all the fine ashes have dropped through the screen into the scoop and the coals remain on top. All the dust raised by this proceeding is confined to the inside of the furnace.

INDUSTRIAL and MECHANICAL NOTES

Amber is divided into 100 different kinds.

A new roofing material is steel coated with lead.

Nearly all the meerschaum in use comes from Turkey.

Gas is being extracted from the cottonwood trees of Kansas.

Benzol is being pushed as a substitute for gasoline as auto fuel.

Graphite from a lead pencil is the simplest cure for a squeaky hinge.

The world's production of copper has trebled in the last twenty years.

Russia is showing a marked preference for automobiles of American make.

The conductivity of aluminum is about 60 per cent. that of annealed copper.

What promises to be a valuable deposit of asbestos has been discovered in Venezuela.

Earth excavated from Panama canal is sufficient to build 63 pyramids the size of that of Cheops.

A method for making felt boots and knitted goods out of dog hair has been patented by a Russian inventor.

Higher prices for tin have led to the extensive use of aluminum foil for wrapping tobacco in England.

The addition of a pint of glue water to four gallons of whitewash will prevent the latter rubbing off a wall.

A leather covered metal tube which may be slipped along a closed umbrella to roll it tight is an English invention.

Wyoming produced more than six times as much gold last year as the year before but less silver and copper.

KEEP THE PROPORTION

FOR GOOD RESULTS, RECIPES MUST BE FOLLOWED.

Except in the Matter of Flavoring, Where One's Own Taste May Be Made Guide, Alterations Are Likely to Spoil Dish.

As a rule, a recipe should be faithfully followed. For instance, in making soup you cannot, because you are short of the given quantity of meat, put in the same quantity of water without damaging the soup, but you must reduce the amount of the water and every other ingredient in the same proportion. In matters of flavoring you may vary to suit circumstances. If you are told to use cloves, a bit of mace may be substituted. If you read a recipe and it calls for something you have not, consider whether that something has anything to do with the substance of the dish, or if it is merely an accessory for which something else can be substituted. If you are ordered to use cream in a sauce, milk with a larger amount of washed butter may take its place.

Where cream is the chief part of the dish, milk will not do. For a cake in which cream is used, butter whipped to a cream may take its place. Again, in cakes be very careful that the exact proportions of flour, eggs and milk are used. Never lessen the amount of eggs where soda and acid are depended on for lightness. Never add milk, if a cake is too stiff, when milk is not one of the ingredients, but another egg may be used. If milk is used, a little more may be added.

Flavoring may be always varied Sometimes in "cook books" you are told to use articles not frequently found in ordinary kitchens, such as a salamander, which is very useful but seldom found in small kitchens; but when you wish to brown the top of a dish and putting it in the oven will not do, or the oven is not quick enough to serve, an iron shovel, made nearly red, and a few red cinders in it, serves as a good salamander. It must be held over the article that requires browning near enough to color it, yet not to burn.

You must beware of attempting too much at once; perfect yourself in one thing before you attempt another.

Economical Suggestions.

Silk should never be ironed on the right side, as it will be shiny wherever the iron has touched it.

To prevent the gravy soaking through the bottom crust of meat pies brush over the crust with white of egg.

After frying onions pour a little vinegar into the frying pan, let it get hot, and it will remove all smell from the pan.

When washing coarse clothes use soft soap, as it will go further than the ordinary yellow and is more efficacious.

Do not leave wooden tubs dry or they will quickly crack and come apart. Keep a little water always standing in them.

Heart-Shaped Rolls.

Make rolls from the following recipe: One quart of flour, one tablespoonful of butter, one and one-half level tablespoonful of sugar, one tablespoonful of mashed potato, one-half compressed yeast cake dissolved in one-half cupful of cold water, scant pint of milk, and one egg. Knead until it forms a soft dough, cut into heart-shaped balls, and bake when light. Serve, freshly baked, with heart-shaped pats of butter for a Valentine's day luncheon or supper.—Harper's Bazar.

Apple Meringue.

Core and pare the apples and lay them in a baking dish, fill the cavities with sugar, a few drops of lemon juice and a little grated rind. Add a little water and bake carefully until tender. Then cover with a meringue made with the whites of three eggs for six or seven apples, and three tablespoonfuls of powdered sugar. Brown it slightly and serve with a sauce made of the yolks of the eggs, three tablespoonfuls sugar and one pint milk, and cook like soft custard. This may be served hot or cold.

Buttermilk Cakes.

One quart of buttermilk, one level teaspoonful of salt, two eggs, flour to make a thin batter and one teaspoonful of baking soda. Beat up the eggs well, add the salt and mix thoroughly. Dissolve the soda in two tablespoonfuls of boiling water, then stir it into the buttermilk. Now gradually add the flour, stirring all the time, until you have a batter that will pour smoothly from a spoon. Give a good beating and bake quickly on a hot, well-greased griddle.

Potted Ox Tongue.

Carefully remove the rough skin of one tongue, and then pound it very fine. Now add an ounce of mixed spices, put in five ounces of butter, then beat all together thoroughly. Now firmly press this mixture into little pans and pour clarified lard or Set back in oven to brown slowly. butter on top. Put on paper tied firmly and keep in ice chest.

Butternut Candy.

One pint maple syrup, one cup granulated sugar. Boil till it hardens in cold water, then cool a little, stirring constantly. Be careful not to stir too long and sugar it. Stir in butternut meats and cool on buttered plates. The more nuts the better.

AVOID WARMED-OVER COFFEE

Hard to Make the Beverage Palatable, Though There Are Uses to Which It May Be Put.

Never serve warmed-over coffee. It is one of the worst of warmed-overs and has little justification. If it must be done pour the coffee from the grounds, strain and set in a tight glass jar in a cold place. When reheating tie a little fresh coffee in a lawn bag and bring to a boil with it. This gives more of the fresh-made flavor.

Left-over coffee is good strained and kept on the ice until lunch, when it serves as iced coffee. This should have whipped cream and sugar passed with it. Have iced tea glasses half full of shaved ice and pour the cold coffee over it. Occasionally the whipped cream, sweetened, is mixed with the coffee, but tastes vary too decidedly to make this feasible when strangers are to be consulted.

Another use for left-over coffee is to turn it into a dessert, a mousse, gelatin or ice cream, the coffee being the sole flavoring, though sometimes it is improved by adding a tablespoonful of sherry or brandy.

More prosaic, left-over coffee can be sealed in glass jars and be ready to dilute to give lace curtains, nets and narrow laces a creamy tint after laundering.

KEEPING FLOOR IN CONDITION

Excellent Polish May Be Made at Home and Kept for Use—Use No Soapsuds on Hardwood.

Polishing floors is hard work, and calls for no end of "elbow grease." For a hardwood or stained wood floor, take eight ounces of yellow beeswax, one quart of Venetian turpentine; cut the wax into small pieces and pour the turpentine over it, and let stand in a vessel of warm water until dissolved, which it will readily do; then bottle. Apply a very little at a time with a flannel cloth, rubbing until there is none left on the surface, then proceed until the whole floor is finished. It keeps the floor in excellent order, and the polish is required ordinarily about once in six months.

Soapsuds should never be used on a hardwood floor that is oiled or waxed. All that is needed is to wipe with a cloth dampened in a little warm water—say a wash basin full, to which about two tablespoonfuls of coal oil has been added. One tablespoonful to the basin will be enough for anything unless very dirty. The oil should be well stirred into the water, the cloth just dampened, wrung out as dry as possible before use, and the floor polished afterward with a clean flannel cloth. This is good for matting also.

Rhubarb Mold.

An excellent mold for a luncheon or supper dish is made of rhubarb cut into lengths and boiled until sufficiently liquid to pass through a jelly bag. Then the liquid so procured is sweetened and stiffened with a little good gelatine. This should color quite nicely of itself, but if it does not seem quite of an appetizing pinkness, a few drops of carmine can be added. This is cooked till of the necessary stiffness to "jelly" well, and then poured into mold and set aside to cool. Whipped cream should be served with it.

Pigeons Served With Peas.

Put the pigeons into a stewpan with a little butter, just to stiffen; then take them out, put some small slices of bacon into the pan, give a fine color, draw them, and add a spoonful of flour to the butter; then put in the pigeons and bacon, moisten by degrees with gravy, and bring it to the consistency of sauce; boil it; season with parsley, young onions, and let it simmer; when half done put in a quart of peas, shake them often, and when ready thicken the peas with flour and butter. There should be no gravy left.

Cottage Cheese Salad.

Place over the fire a pan of milk which has soured and thickened. When it has become scalding hot ladle the curd and whey into muslin bag and hang up the bag to drain for an hour or two, then take the curd from the bag. Moisten with thick cream. Mix in a small quantity of salt, work well with the hands and either form in a mound, in a glass dish or roll in balls. Keep well covered in a cool place and serve cold on lettuce leaves.

Breaded Beet Cubes.

Cut small beets into cubes and cover with very fine cracker crumbs and some minced bacon. Place in the oven surrounded with several slices of bacon to furnish drippings, and baste the beet cubes frequently with the liquor. Serve piping hot.

Cream Candy.

Two cups brown sugar, one cup white sugar, one cup sour thin cream; boil till it hardens in cold water; add one-half cup broken walnuts, beat till it thickens and feels heavy around edges; pour into buttered tin and cut when partly cold.

Quick Toaster.

When toasting bread over the gas stove, lay a piece of wire gauze over the gas plate. This will prevent burning the bread and will toast it in half the time.

Bohemian Sandwich.

Add stoned and chopped olives to cottage or neufchatel cheese that has been made smooth with a little Worcestershire sauce. Spread between the slices of brown or rye bread

INTERNATIONAL SUNDAY SCHOOL LESSON

(By E. O. SELLERS, Director of Evening Department The Moody Bible Institute of Chicago.)

LESSON FOR MARCH 2

GOD'S COVENANT WITH ABRAM

LESSON TEXT—Gen. 15:5-18.
GOLDEN TEXT—"He is faithful that promised."—Heb. 10:23.

Until within recent years it was frequently asserted that Abram's battle, as recorded in Gen. 14, "had not one whit of proof," yet the archaeologists have not only reconciled the apparent discrepancies but have proven beyond a question the accuracy of the record. Abram's victory over the four confederate kings is a story rich with typical suggestions.

I. "After These Things." vv. 1-7. God's word (v. 1) came to Abram not only as a counsel but for assurance as well. So, too, our assurance is his word, I John 5:13. In the midst of the uncertainty and the strife, for we must remember Abram never possessed the land, God appeared to him in a vision and said, "Fear not." See Isa. 41:10. There in the midst of foes (Jas. 2:23) God promised to be to Abram a shield and an exceeding great reward. A "shield" for there is to the Christian life a militant side, Eph. 6:13, 14, I Tim. 6:12. A "reward" which was far more rich than any given by man. See 14:21, Prov. 10:22.

Abram Was Human.

But Abram was, after all, human, and we read in verse 2 his question about descendants, he being as yet childless. Even so, however, Abram was willing to count the child of his steward as fulfilling the promise of God. Not so with God for the promise (12:3) was to include Sarah also. God very clearly makes this plain in verse 4, the heir was to be Abram's indeed and not the child of another. But not only is Abram to have an heir but the land in which he was sojourning as a pilgrim was to be his and his seed to be as the stars for multitude.

"And he believed." The great test to this faith came later. Heb. 11:19, but here in this first distinct scriptural history of faith we find set forth those principles that have governed through all time. (1) The acceptance of the word of God, e. g., to have our trust built upon or supported by the word of Jehovah, see Isa. 30:21; (2) to act upon that faith so that our course in life manifests the belief of the heart.

God's covenant, 12:1-4, is confirmed in seven ways, 1, Posterity, (a) natural, "earth," (b) spiritual, "heaven," (c) also through Ishmael, Gen. 17:18-20; 2, Blessing, both temporal and spiritual; 3, great name; 4, Be a blessing, Gal. 3:13, 14; 5, "I will bless them that bless thee;" 6, "and curse them that curse thee; 7, the families of the earth blessed through Abram, e. g., through Christ, Gal. 3:16.

"And he believed in the Lord" (v. 6). Abram built upon the naked word of God, he simply looked at that and that alone, Rom. 4:20, R. V. All God asks of us is for us to take him at his word. So it is that as we take his word about Jesus, he reckons that faith to us as righteousness; no matter how unrighteous we may have been, see Rom. 4:3-6; Gal. 3:6-7. The one think that God demands is that we believe him and his word.

II. "Whereby Shall I Know." vv. 8-18. The weakness of human faith indicated by Abram's question (v 8) is answered by God giving to him directions for the preparation of a sacrifice. Abram did not really doubt God's word (v. 6), but he did desire a confirming sign. Many today are looking for assuring signs from God when his bare word should be enough. Asking for signs is not always safe. Luke 1:18-20, but as in Abram's case God does give us a pledge a sign of our inheritance, 2 Cor. 1:22, Eph. 1:14. God gave Abram, after he had explicitly followed his directions, a symbolic vision of himself. Someone has suggested that the vile birds of prey (v. 11) are symbolic of Satan, and Abram, driving them away, a symbol of one victory over evil, Jas. 4:7. God is always nearer to man and best reveals himself when we are in the midst of sacrifice. God tells Abram of those days of servitude on the part of his descendants while they are to be in Egypt, of God's judgment to be brought upon that land and of their ultimate deliverance.

Symbols of God.

Every detail of these predictions and promises was fulfilled. In verse 15 there is presented the great thought of the need of preparation in youth for the future days of "good old age"—also in this verse a suggestion of the life beyond the grave.

The smoking furnace and the flaming torch were symbols of God himself. Four centuries of opportunity were to be allowed the powerful Amorites who now possessed the land before the land came into bona-fide possession in accordance with the promise, for God's judgment was conditioned upon the "measure of their iniquity being full." In the midst of this horror of darkness came God's final assurance to Abram in the symbolic "flaming torch" which passed between the pieces of the slain animals typical of the two parties to the contract.

CONSTIPATION

Munyon's Paw-Paw Pills are unlike all other laxatives or cathartics. They coax the liver into activity by gentle methods, they do not scour; they do not gripe, they do not weaken; but they do start all the secretions of the liver and stomach in a way that soon puts these organs in a healthy condition and corrects constipation. Munyon's Paw-Paw Pills are a tonic to the stomach, liver and nerves. They invigorate instead of weaken; they enrich the blood instead of impoverishing it; they enable the stomach to get all the nourishment from food that is put into it. Price 25 cents. All Druggists.

CANADA'S OFFERING TO THE SETTLER

THE AMERICAN RUSH TO WESTERN CANADA IS INCREASING

Free Homesteads

In the new Districts of Manitoba, Saskatchewan and Alberta there are thousands of Free Homesteads left, which to the man making entry in 3 years time will be worth from $20 to $25 per acre. These lands are well adapted to grain growing and cattle raising.

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In many cases the railways in Canada have been built in advance of settlement, and in a short time there will not be a settler who need be more than ten or twelve miles from a line of railway. Railway Rates are regulated by Government Commission.

Social Conditions

The American Settler is at home in Western Canada. He is not a stranger in a strange land, having nearly a million of his own people already settled there. If you desire to know why the condition of the Canadian Settler is prosperous write and send for literature, rates, etc., to

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Canadian Government Agents, or address Superintendent of Immigration, Ottawa, Canada.

THOUGHTFUL RUTH.

Ruth—Yes; I got papa to buy a vacuum cleaner for mother.

Maud—How thoughtful!

Ruth—Yes. Mother is a little stiffened up with rheumatism, you know, and I used to feel so sorry to see her trying to use the broom that I always left home on sweeping day.

What She Meant.

"So you think I smoke too much?" he asked, just to keep up a conversation that seemed to be languishing.

"Not at all," she answered, not very skillfully concealing a yawn.

"You said you thought so."

"Pardon me. I don't think you are smoking too much."

"Didn't you say that I'd die if I didn't cut it down?"

"Yes—that's what I said."

It took him a long time to get it and then he was quite angry.

Connoisseur.

"Mother, is father in the fruit business?"

"No, son. What put that idea into your head?"

"Well, when he took me for a walk the other day he met Mr. Jones, and all they talked about was peaches, pippins and dates."—Judge.

A DIFFERENCE.

It Paid This Man to Change Food.

"What is called 'good living' eventually brought me to a condition quite the reverse of good health,' writes a N. Y. merchant.

"Improper eating told on me till my stomach became so weak that food nauseated me, even the lightest and simplest lunch, and I was much depressed after a night of uneasy slumber, unfitting me for business.

"This condition was discouraging, as I could find no way to improve it. Then I saw the advertisement of Grape-Nuts food, and decided to try it, and became delighted with the result.

"For the past three years I have used Grape-Nuts and nothing else for my breakfast and for lunch before retiring. It speedily set my stomach right and I congratulate myself that I have regained my health. There is no greater comfort for a tired man than a lunch of Grape-Nuts. It insures restful sleep, and an awakening in the morning with a feeling of buoyant courage and hopefulness.

"Grape-Nuts has been a boon to my whole family. It has made of our 3-year-old boy, who used to be unable to digest much of anything, a robust, healthy, little rascal weighing 32 pounds. Mankind certainly owes a debt of gratitude to the expert who invented this perfect food." Name given by Postum Co., Battle Creek, Mich. "There's a reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest. Adv.